THE

VETERINARY JOURNAL

Editor :

FREDERICK HOBDAY, C.M.G., F.R.C.V.S., F.R.S.E.,

HONORARY VETERINARY SURGEON TO HIS MAJESTY THE KING.

OFFICIER DU MERITE AGRICOLE (FRANCE).

CAVALIERE DEI S. S. MAURIZIO E LAZZARO (ITALY).

HONORARY MEMBER OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION.

AND FORMERLY PROFESSOR IN THE ROYAL VETERINARY COLLEGE, LONDON.

Sub-Editor :

GLADSTONE MAYALL, M.R.C.V.S.

DECEMBER, 1920.

THE LATE COLONEL JOHN FARMER, C.I.E., F.R.C.V.S.

COLONEL JOHN FARMER, C.I.E., who died in Dublin at the beginning of September, joined the Army Veterinary Corps in October, 1893. He served with that Corps at various places in Central India for about eight years, officiating, from time to time, in various appointments at Bombay, Nagpur, and Agmere, in the Indian Civil Veterinary Department. In 1901 he joined the large cattle breeding farm at Hissar in the Punjab, becoming Superintendent of it from October, 1903. Under him the farm did most excellent work in supplying bulls of the well-known " Hissar " breed for breeding purposes in the Punjab, and bullocks and mules for Army purposes. In 1912 he was transferred to Lahore as Chief Superintendent of the Punjab Civil Veterinary Department, which post he held till his death. In it also he did most excellent work, both in encouraging the peasants to use good animals for sires, and to have resort to inoculation against disease.

An excellent linguist, he was a very hard worker and most popular with everyone he met, whether Englishman or Indian. His premature death was, to a large extent, due to devotion to duty. " John Farmer " will long be remembered in the Punjab.

Editorial.

THE UNSATISFACTORY CONDITIONS OF SERVICE OF R.A.V.C. OFFICERS.

ONE very noticeable effect of the great war has been the wider dissemination of a knowledge of the conditions of military service, and a closer sympathy between the civilian population and their military *confrères*.

This feeling has been no less noticeable in the veterinary profession than in other sections of the community, though many did undoubtedly feel that they had not been adequately compensated for the sacrifices they had made. They were glad, however, to serve in the emergency, as a matter of duty, without being too much concerned as to the amount of the emoluments to which they were entitled.

Rates of pay and pension, and the conditions of service and retirement, therefore, were matters which did not concern them very vitally, and they were mostly content to draw what the paymaster was willing to give them and congratulate themselves that it was no less.

In the regular service, on the other hand, now that the war is over, pay and pension, and the conditions of service, are matters of very grave concern at the present high cost of living, and it will be a great disappointment to the majority of their late brother officers to learn that, in spite of the fine record of the R.A.V.C. during the war, veterinary officers are very unfavourably placed under the new rates of pay and pension authorised in Army Order 324 of 1919. To a casual observer these rates appear much the same for all, but the conditions of service are not the same in the different branches, and we have been at considerable pains to ascertain the exact position of officers now serving in the R.A.V.C. as compared with those of other branches. The situation revealed is even more serious than we had been led to suppose, and it is high time that the profession should realise how unsatisfactory the conditions of service in the R.A.V.C. are under the existing regulations. It is impossible in the space at our disposal to give details of the figures on which our statements are based, but they may be accepted as accurately indicating the position, and can be checked by anyone who cares to take the trouble to study the latest orders in conjunction with the Royal Warrant for pay and the quarterly army list.

The following are some of the more important points, viz. :—

Pension.—Before the war, on completion of 20 years' service, veterinary officers were entitled to retire with a pension of £300 per annum. Under the regulations now in force they are only entitled at 20 years' service to a pension of £285 per annum, while the average pension to which officers of the R.A.M.C., now serving, with 20 years'

service to their credit, are entitled, works out at over £500 per annum. It is true that officers of the R.A.V.C. who joined the service prior to the publication of this order can at present retire at 20 years' service on the pre-war pension, viz., £300, but this fact does not alter the situation very materially. Whether the amount is £300 or £285 it is too small at the present value of money to compensate a professional man for the twenty-five best years of his life spent at College and in the Army, often to the great detriment of his health. As time goes on the difference is not so great as this, but veterinary officers are, on the average, always years older than R.A.M.C. officers on arriving at a corresponding pension rate, and the difference is still greater when the comparison is made with other branches of the service.

In consequence of this, the majority of administrative veterinary officers likely to be promoted in the near future will hardly be able to earn full Colonel's pensions before being compulsorily retired at 57 years of age, while a considerable proportion of the Majors can see little hope of being promoted even to Lieut.-Colonels, however good their record of service may be. The maximum pension of a Major is £450 a year at 27 years' service, by which time their average age will be 51 years.

In the R.A.M.C. and other branches of the service, on the other hand, an officer with a satisfactory record has every likelihood of getting promotion to the rank of Surgeon-General, or Major-General at least, and qualifying for a pension of £1,000 or more. The present position, therefore, of R.A.V.C. officers as regards pension is a very unsatisfactory one. The majority can see little prospect of being able to qualify for sufficient pension to enable them to support a wife and family decently and educate any children they may have, if they remain in the service. Moreover, the pension to which they are entitled at 20 years' service under the new conditions is not sufficient to keep the wolf from the door while a practice or other means of livelihood is being built up, which was one of the inducements formerly held out to prospective candidates for the Corps.

It should also not be overlooked that an officer's pension lapses at his death and his widow is left with only a small pittance.

Pay.—In the matter of pay R.A.V.C. officers, from the rank of Major upwards, are also very badly placed. Field officers of corresponding ages in the R.A.M.C. and other branches are now drawing, on the average, from 30—50 per cent. more in pay and allowances. Moreover, their prospects of rising to the higher ranks are much greater than those of officers of the R.A.V.C., to whom there are, under normal circumstances, only, at most, two Major-General appointments open for the whole Corps.

Officers of the R.A.M.C. and other Corps are also eligible for specialist and command pay, which are not granted to R.A.V.C. officers. The amount of these is not inconsiderable, and they do offer some encouragement to officers who take up specialists' work or hold positions of responsibility, which in the R.A.V.C. is totally lacking.

Under A.O. 324 of 1919 the total pay and allowances of a Major of over 20 years' service (unmarried) is £887 per annum, which, according to figures published by responsible officials during the recent coal strike, is no more than an ordinary miner over 18 years of age can earn if he cares to work conscientiously five days a week.

In view, therefore, of the very heavy expenses to which officers are put, in constantly moving about the world and in other respects, this cannot be considered a fair living wage for a professional man of 44 years of age or over, and in justice to a service which amply proved its worth during the war the regulations should be amended so as to bring R.A.V.C. officers into line with officers of corresponding ages in other branches.

Causes.—The main causes of the unsatisfactory position of R.A.V.C. officers as compared with others under the existing regulations are :—

(1) R.A.V.C. officers, having to obtain the necessary veterinary qualification before they can be granted a commission, are, on the average, five years older than officers of other branches on joining, with the exception of the R.A.M.C., whose officers are compensated for this by more rapid promotion and higher rates of pay and pension than are granted to the R.A.V.C.

(2) The stagnation in promotion caused by the fact that the regulation placing administrative officers on the half-pay list after a definite period in an administrative appointment or rank is not enforced in the R.A.V.C. as in other branches of the service.

Consequently, once an officer of the R.A.V.C. is promoted to the rank of Lieut.-Colonel there is nothing but ill-health to prevent his remaining on the active list continuously until he is compulsorily retired on reaching the age limit. This has the effect of blocking promotion for the officers below him, with the result that some of the senior officers now in the veterinary service will have been able to serve as much as 18 years in the administrative ranks before they are retired, while few of the Majors can hope to serve half as long in those ranks, and a considerable proportion can see little prospect of ever being promoted to Lieut.-Colonel at all.

In other branches of the service, as a rule, officers are placed on the half-pay list after four years' service in an administrative appointment, and this has the effect of obviating the stagnation in promotion which

at present exists in the R.A.V.C. Promotion being almost entirely by time, this makes the Corps a hopeless one for any professional man unless he is well enough off to be able to afford to ignore the financial aspect, and until something is done to remedy the position we would strongly urge any young veterinary surgeon to consider the position well before entering the R.A.V.C.

Under present circumstances it has nothing to offer to professional men of energy and enthusiasm, and young men looking for careers would be better advised to remain in civil life or enter one of the Colonial Government services—which do at least afford opportunities for earning a reputation in special work.

Any who have leanings towards a military life would be much better advised to enter any of the other branches of the Army, in which, no professional qualification being necessary, they can obtain commissions at a much earlier age, and their ultimate prospects are so much better.

General Articles.

THE TATTOOING OF THE HORSE.

By Lt.-Col. WATKINS PITCHFORD, C.M.G., F.R.C.V.S.
(*Royal Army Veterinary School, Aldershot*).

The art of tattooing has been practised from time immemorial amongst civilised and semi-civilised peoples as a method of personal adornment or for purposes of differentiation.

Although so ancient, the art in question would not seem to be excelled—and perhaps not equalled—by the modern tattooer with his mechanical advantages, for many of the old Chinese tattoo patterns were of great complexity and beauty of design. Such a high degree of development of the art was possible with the light yellow skin of the Mongol races, but was obviously restricted in the case of the more deeply pigmented Aryan skin, especially as this tended to approach the Negroid type.

An extension of what may be considered the normal tattoo tendency is to be traced in the skin-puncture, and linear incision in regular geometric patterns, such as is practised at the present day by some uncivilised peoples, a practice tending towards the same end as the tattoo mark and attaining this end by the creation of a skin-pattern formed by scar-tissue, where regular cicatrices or fibrous-tissue markings produce a design permanent in character.

A good example of the high degree of development of the art as practised before the Christian era is the incident recorded in history of the Greek slave at the court of Darius, upon whose shaven scalp

a secret message was tattooed addressed to the Greek Aristogoras in Athens. When the hair had grown again after the operation the slave delivered the message to the addressee literally in person, the hair being again removed from his head to disclose the writing. Such a procedure must obviously have called for the exercise of as high a degree of art on the part of the operator as of patience on the part of the slave who was called upon to bear both the operation and the message.

Although essentially masculine in its adoption, the dictates of vanity and the desire for personal adornment would seem to have been chiefly responsible for the establishment of the tattoo. The operation, however, has often been made to serve a more practical purpose in the marking of convicted felons. A tattoo-mark as a proof of identity has of course long been accepted by the Law in evidence, and many criminal charges have been decided by the presence or absence of such a mark upon the person of the accused. It will be remembered that one of the determining facts in the trial of the famous Tichborne claimant was the discovery that the site of a known tattoo-mark upon the claimant's person bore signs of surgical interference, evidently designed to obliterate the mark itself. Within living memory, the custom of tattooing the back of a deserter before discharge from the Army has been abandoned, a custom which in its turn replaced the more barbarous custom of branding even the political offender on his release from the pillory with a hot iron upon the face ; or as with the early American settlers, in burning the letter " A " into the flesh of the unfortunate woman convicted of frailty.

Branding, of course, has from time immemorial been used as a means of differentiation with the lower animals, such as horses and oxen, etc. Apart, however, from the depreciation of the hide of such branded animals and the pain inflicted by the operation, the system of branding has a further limitation in the fact of the non-permanent nature of the mark—unless indeed the iron is so hot or its contact so prolonged as permanently to devitalise the deeper layers of the skin with their contained hair-bulbs.

Although the tattoo instrument cannot in all instances replace the branding iron, especially where mobs of cattle are concerned, it has of late years successfully replaced the latter in the marking of the horse. By the method of tattooing the gum of the horse above the upper incisor teeth, it is now possible to mark the animal in a manner which will afford such conclusive proof of identity as will bring to naught the activities of the horse-coper and the thief. Nor with a system of tattooing is the substitution of one horse for another possible, such as has lately been exposed in a recent *cause celèbre.*

The operation, when once performed with proper material, is permanent in its result, at least so far as the horse is concerned. In man, the consensus of legal opinion allows a lapse of ten years as the minimum period in which a tattoo mark can disappear, while evidence is abundant that such marks often persist for as long a period as 80 years without losing their distinctness.

The question of the permanency of the tattoo mark appears to depend upon the depth to which the puncturing instrument has penetrated the skin and to the nature of the pigment used. Indigo and vermilion tattoo markings, frequently employed in the human tattoo pattern, are much more fugitive than the marks produced by lamp-black (or in cases where gunpowder has been used as the tattoo

FIG. 1.

pigment), probably on account of the complete insolubility of the carbon particle contained in the latter. Where the implantation is deep and the pigment is composed of insoluble and particulate matter, the resulting mark is of a permanent nature providing the surrounding tissue remains undisturbed. The pigment, once deposited beneath the lower layers of the epidermis, lies inert and appears to evoke little tissue response or cellular reaction such as would lead to the encapsulation of the pigment or its removal by phagocytic agency.

Examination of the photo-micrograph (Fig. 1) (which shows a section of the gum made through an old tattoo-mark) shows that the carbon masses comprising the pigment have been forced in a direction

parallel to the free surface of the gum tissue. The smaller particles, lying in the tissue spaces, would all appear to have been floated into their final place by the more fluid part of the tattoo mixture before the final absorption of the same.

That some vital action, probably of a cellular nature, does take place upon the introduction of the insoluble pigment beneath the superficial layers of the skin seems obvious from the differences observable in Figs. 2 and 3, the one (2) showing the diffuse and ill-defined contour of the tattoo-mark in a gum photographed during life, as contrasted with (3), where the operation was made upon the gum of a dead horse. It is to be noted in the latter that the marks are discrete and punctate possessing a well-defined contour contrasting strongly with the appearances produced when the pigment is brought into contact with the living membrane, where a diffuseness of outline has been produced, probably through the removal of the

FIGS. 2 AND 3.

outlying particles by the lymph-stream circulating in the channels and spaces of the tissue during life. Such spaces would be patent and elastic *intra vitam*, and so would permit a certain amount of diffusion of pigment particles, tending to blur the outline of the carbon deposit and permit of the merging or coalescence of the actual puncture points themselves.

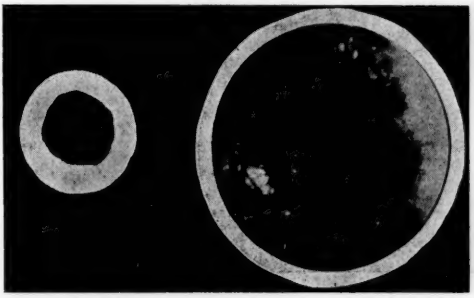
No evidence exists pointing to the action of the phagocytic cell as a means of the removal of these carbon particles from the site of their original implantation. In fact, such microscopic evidence as exists would point to the existence of a state of negative chemotaxis in which the pigment particle exerted a repellent influence upon the migratory white-cell, a fact which seems strange in view of the known readiness with which these cells attack and ingest particles of other pigments such as carmine, neutral-red, etc. The existence of a state of negative chemotaxis would explain the special fitness of lamp-black,

or other purely carbonaceous material, for the purpose of the tattooer, who requires as a first essential a permanent or non-fugitive pigment which will neither diffuse nor permit of its absorption or removal by the living cells of the tissue in which it is implanted.

Dyes proper, however intense their hue, are soluble and fugitive, giving rise to a marked blurring of the contour of the tattoo-mark, to an extent which makes it often difficult within a few days of the operation to recognise the original design.

Many of the samples of so-called "Indian" and "Chinese" inks are composed principally of lamp-black, and in such cases are well suited for the purpose of tattooing. Some such inks, however, consist of a simple aqueous solution of the aniline dye "nigraniline," a very intense black but quite unsuited to the purposes of the tattooer. (Such aniline dyes are to be detected with comparative ease by their penetrative

FIG. 4.—a and b.



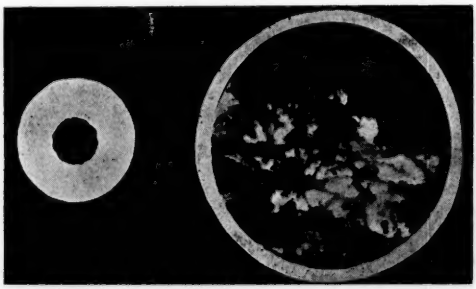
action upon gelatine. If a small cube of this material is soaked for a few hours in a solution of any of the aniline dyes it will be found on section to be deeply penetrated by the dye, a property not shared by the ordinary vegetable dyes.)

Figure 4 serves to show the action of such a dye when dropped as a blot on porous paper, and the magnification of this latter to shew the non-particulate nature of the dye and its diffuse and even standing of the fibres of the paper, an effect which is contrasted in Fig. 4 with the non-diffusing and particulate character of a drop of ordinary lamp-black tattooing fluid.

We are restricted, then, at least so far as the horse is concerned, to the use of carbon (in any form capable of sufficiently minute division). The use of simple charcoal will produce a good tattoo, as many of the old gunpowder tattoos serve to show. This pigment material is

coarse as compared with the carbon deposited in a state of minute division in the smoky flame of an oil-lamp, which constitutes the "lamp-black" proper. "Gas-black"—the carbon deposited by the flame of an ordinary fish-tail gas-burner—is a very black material and to be preferred to the lamp-blacks proper by reason of its freedom from the greasy principle present in these latter. In a series of tests as to the fat content of the various forms of lamp-black carried out at the Army Veterinary School, Aldershot, it was found that a mineral oil lamp-black contained as much as 3.3 per cent. of fat, the fat in the soot from burning olive-oil amounting to only 1.1 per cent., while the other blacks gave intermediated figures. Horse fat and whale fat gave approximately the same percentage (2.03 per cent. and 2.3 per cent.), but the final result of the tattoo-mark from these two materials was distinctly in favour of the latter.

FIG. 4.—c and d.



As will be readily understood, the use of a greasy lamp-black leads to trouble in the mixing and fails to produce as good a final pattern as the lamp-black deprived of its fat. This process of de-fatting is carried out by lengthy agitation of the black with ether. In alcohol (cold) the fixed oils are but slightly soluble, but the presence of the spirit helps the mixing of the pigment when water is added in the preparation of the tattoo fluid.

Of the various lamp-blacks tested as to their suitability for tattoo purposes, it was considered that the black obtained from whale-oil gave the best final result, but the differences were not so marked as to warrant the recommendation of this material to the exclusion of others, especially the lamp-black (so called) deposited by the ordinary gas-flame.

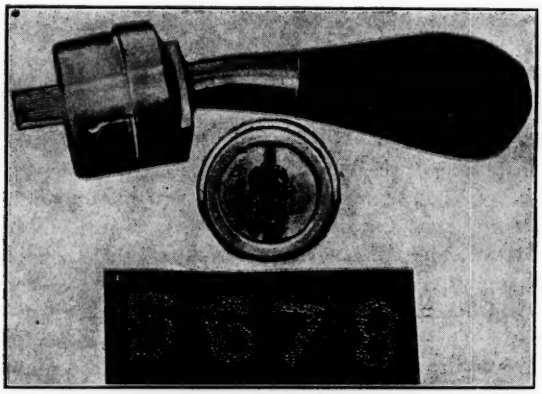
Regarding the technique of the operation in the horse. This is simple and takes but a few moments. With a "head-shy" or fractious

animal a certain amount of restraint is necessary, such as is provided by an attendant on each side holding the head (either by the ear or by the cheek-strap of the halter, or both). The gum itself is a comparatively insensitive structure, and painting the operation-site with an agent such as tincture of aconite serves to deaden the sensation and so to reduce the risk of the horse—by a sudden movement of its head—scratching the gum against the tattoo instrument, and so producing unintentional marks which must mar the final result—an accident especially likely to occur when attempting the operation for the first time The transitory pain of the operation is not to be compared to the pain inflicted upon the horse in the system of branding the body with a hot iron.

Penetration of the needle as far as the periosteum is not of course necessary to the production of a satisfactory tattoo-mark, but it is difficult to gauge the exact depth of the skin structures and—in the adult horse at least—the sub-dermal connective tissue layer is very thin and the operator must have developed the *tactus eruditus* to an extreme degree to be able to detect when his needles have penetrated but not passed the layers of the skin proper. The disadvantage of an incomplete penetration is obvious, for with the needles thrust lightly and insecurely into the skin, any movement of the horse's head is likely to displace them and lead to a scratching or blemish of the gum and entails the necessity of replacing the needles upon the exact site of the previous puncture and re-thrusting them more deeply. Another reason for the effective thrust is the fact that it is difficult to arrange all the needles in the pattern at exactly the same height when using the instrument shown in Fig. 5, which is the best of its sort yet designed. This slight irregularity necessitates a sufficiently deep thrust to secure the effective penetration of the shortest needle. The question is only one of a small fraction of an inch, but the perfection or otherwise of the finished pattern will obviously depend upon all the needle punctures of the pattern being adequately reproduced upon the gum. Figure 5 shows the general details of the instrument in use for the tattooing of the horse, and the figure is self-explanatory. At intervals it is necessary to take the needles out of the holder for cleaning and replacement of blunt points, but as the reassembling of some of the figures takes some time, this should not be done more frequently than necessary. After painting the gum with the tincture mentioned above, and while a state of local anæsthesia is becoming established, the operator arranges the several tattoo holders in their sequence, each figure being in a separate handle. The chalking of the intended number upon the horse's fore foot is a good practice, tending to minimise risk of error. Where as many as five figures have to be

impressed, it is a good plan to prick the central figure of the number first, thereby securing a balanced spacing of the whole pattern. With the head firmly held, the operator, holding the tattoo instrument in his right hand, grasps the upper lip firmly with his left hand and everts it. The exact site of the figure being accurately determined, the needles should be thrust firmly through the gum, imparting to the instrument not only a deep forward thrust but also a slight rotary or staggering movement, intended to enlarge the needle-track at its extreme depth so as to allow the maximum amount of pigment to be deposited at its ultimate site. The whole of the numbers may then be punctured before the black is applied, or each figure may be blackened separately by painting some of the pigment over the site of the mark and then rubbing the black

FIG. 5.



thoroughly into the punctures with the tip of the finger. It appears to be immaterial whether the pigment is rubbed into the tissue immediately after the infliction of the puncture or whether a short interval elapses, experiment having shown that the pigment may be effectively introduced into the needle-track several minutes after the withdrawal of the needles, or until the ensuing slight inflammatory reaction commences to become established and so occludes the needle-track. Such occlusion is not apparent at $2\frac{1}{2}$ minutes, but is complete in ten. The operator need not therefore unduly hasten to apply the pigment on account of bleeding, etc., as the occurrence of bleeding does not seem to prevent the penetration of the pigment to the full depth of the needle-track if care is taken to rub the black thoroughly into the operation site.

The mixing of the pigment to the consistency of a thick cream, by the addition of glycerine, to prevent drying, facilitates application and tends to render the mixture aseptic, and so to prevent the formation of the many small points of pus which, with the aid of a hand-glass, may generally be seen along the line of the needle punctures a few days after the operation.

The actual dipping of the needles in the tattoo fluid immediately before making the puncture seems devoid of use, as the needle in the act of penetration appears to effectively clean itself and deposit any adhering pigment upon the surface of the skin.

In the young subject the tissue of the gums is thicker (plumper) than is the case in the horse of advanced age, and it would probably be found practicable to employ smaller figure patterns more adapted to the smaller expanse of gum available for tattooing. There must, however, be a limit to the minimum size of the actual tattoo-pattern, inasmuch as the vascular supply of certain areas—such as those enclosed by the figures 6, 8, 9, etc.—might be endangered (owing to such close apposition of the punctures as would amount almost in effect to a linear incision) with the possibility of consequent sloughing of the small areas in question.

In the adult and old subject the figure once impressed undergoes, of course, no change of size, although the altering shape of the superior maxilla—as the incisor teeth lengthen and the gum tends to recede—causes an alteration in the slope of the tattoo pattern and renders it less obvious. Fig. 6 is a photograph of such a case, the line of incision through the superior maxilla being carried between the central incisor teeth and through the actual site of a tattoo-mark, the pigment composing such mark being seen in section at the point indicated by 6, e, in the schema attached. The very thin layer of gum covering the root of the long incisor teeth is well shown and forms a picture which contrasts with the appearance of a young mouth with its more vertical incisors and thicker gums.

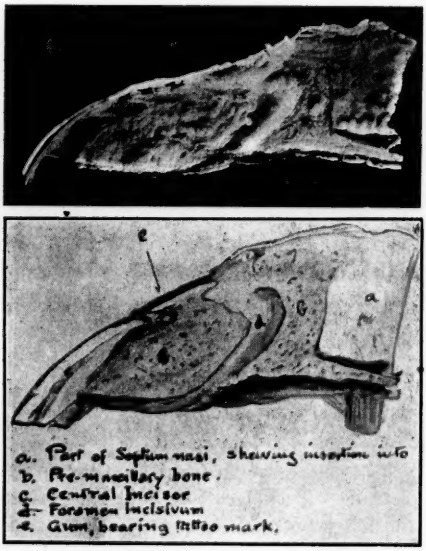
It has been stated as a point in practical working that it is desirable to prevent the horse drinking immediately after the operation, on the ground that the finished pattern is less vivid through the removal of some of the more superficial pigment. While it is difficult to see how such a result could ensue, the precaution is one easily adopted, and in any case no harm can arise from even a prolonged contact of an excess of the pigment with the gum and buccal membrane. If, however, any accidental marks or scratches of the gum have been inflicted, the site of such lesions will of course be permanently blemished. It should therefore be borne in mind that the site of a figure once imperfectly

punctured by the sudden movement of the animal or other cause necessitates a second, deeper puncture on the same site exactly—a result generally difficult to achieve and likely to result in a blurred or double outline, which must stand for all time as an indictment of the unskilled craftsman—

" The moving finger writes, and having writ moves on "

—and by no exercise of our wit can we " lure it back to cancel half a line " either in the great happenings of Destiny or in so small a matter as the removal of a misplaced tattoo-mark.

FIG. 6.


a. Part of Septum nasi, shewing insertion into
b. Pre-maxillary bone.
c. Central Incisor
d. Foramen Incisivum
e. Gum, bearing tattoo mark.

Clinical Cases.

REPORT OF A CASE OF RUPTURE OF THE LIVER.

By BREVET LIEUT.-COL. H. S. MOSLEY, D.S.O., R.A.V.C.

Subject.—An Irish cavalry mare, 15.2, 14 years old.

Previous History.—During eight and a half years' service, the subject had only been sick forty days. The Veterinary History Sheet shows: 21 days with catarrh during the first year of service; 7 days with a wound during the first year of service; 3 days with colic during the fifth year of service; 9 days with a wound during

the sixth year of service. With these exceptions, the mare had been kept in regular work.

Ætiology.—At Reveillé on January 10, 1913, the mare was found dead in her stall. On arrival, I observed the subject was lying on its near side, and by the appearance of the carcase, I should say the mare had been dead about two hours.

There were no signs of struggling, but the head collar was not on the mare. The abdomen was slightly tympanitic; there was no discharge from the normal openings of the body. Blood smears were taken and microscopically examined for anthrax, with negative results.

Autopsy.—There were no signs of any external injury. The *membrana nictitans* and the buccal mucous membranes were very pallid. The carcase was well nourished. The abdominal wall was coated with a layer of fat two inches in thickness. The abdominal cavity contained about four gallons of dark-coloured blood.

Double Colon.—Partial volvulus at the supra-sternal flexure, the retrograde colic artery and colic veins being distended, and their branches congested at this region. The ingesta in the double colon was normal in appearance. There was no inflammation of the mucous membrane.

Small Colon.—Colic mesentery encased in a layer of oily fat, the m.m. and contents normal.

Small Intestines.—The mesentery contained an abnormal amount of fat, the m.m. and ingesta normal throughout.

Stomach.—The stomach was impacted with food, on its anterior face near the greater curvature there was a localised patch about the size of the palm of the hand, of old fibrinous and organised bands of peritonitis. The lining membrane and food were normal.

Liver.—In size slightly smaller than normal, pale yellow in colour, the middle lobe was ruptured at the superior border, the capsule of Glisson was not intact. There were ecchymosis on the posterior face of the lower end of the right lobe. The anterior face was covered with old localised lesions of peritonitis. On section, the liver contained no blood, and the gland substance was very friable and easily broken up.

Spleen.—Small and normal in appearance.

Kidneys.—Normal in size, encased in fat, an inch in thickness. On section, the medullary portion very dark in colour.

Diaphragm.—Thickened at its muscular portion by fatty infiltration, broken down fibrinous adhesions were scattered over the muscular portion on the posterior surface. Ecchymosis over the whole of the anterior surface.

Thorax, Pleura.—Normal.

Lungs.—Dark in colour, due to the vessels engorged with venous blood. At the base of the right lung there were a few broken-down fibrinous adhesions.

Trachea.—The vessels congested, and tracheal tube containing serous coloured froth.

Larynx.—The mucous membrane inflamed, especially at the region of the arytenoid cartilage. The muscles surrounding the throat were very dark in colour.

Vertebræ.—There was no fracture of the cerebral vertebræ.

Heart.—The pericardium was coated with fat, an inch in thickness. The blood in the heart was very dark in colour. Ecchymosis along the ventricular grooves. The ventricular branches of the cardiac arteries and veins congested. There was no abnormal lesion on the endocardium and the auriculo-ventricular valves.

Remarks.—It is suggested that the mare fell when standing asleep, and in the fall, the liver, which was in an advanced stage of ramollisement, was ruptured, setting up internal hæmorrhage, the volvulus of the double colon at the supra-sternal flexure occurring at the same time. The lesions of strangulation were caused by the mare being hung up by her head collar.

SOME CLINICAL CASES.

By OBSERVER.

I.—Dislocation of the Elbow Joint in a Filly.

Subject.—A well-bred yearling hackney filly.

History.—The filly had been seen by the owner's son galloping with other horses in the field about 7 p.m., and then suddenly slipping and falling on the near side, with the near fore limb under the body transverse to the long axis of the latter. She got up, but was unable to put the near fore limb on the ground, and carried it flexed at the knee, the metacarpus being almost at right angles to the forearm. Twenty-four hours after the accident the animal was brought to the College in the College ambulance.

Symptoms.—The filly was standing on three legs with the near fore limb flexed at the knee, but not to the same extent as related in the

history of the case. The region of the elbow was greatly swollen, hot, and painful, and on manipulation it was easily ascertained that the elbow joint was dislocated, the humerus and radius and ulna overlapping the latter being on the outside. The beak of the ulna rested on the humerus just above the uppermost extremity of the abcranan fassa.

Prognosis.—Both lateral ligaments being ruptured reduction may be impossible, and even if it is effected, arthritis and anchylosis are likely to result from the severe injury to the joint.

Treatment.—Administered chloroform to the filly in the standing position, and when she fell completely anæsthetised, we endeavoured to reduce the dislocation by various movements, pulling on the limb to bring the articular ends of the bone on the same level, drawing the radius and ulna forward, and using local manipulation and pressure with the object of forcing the articular surfaces into their normal position. Our efforts were of no avail, and we destroyed the animal.

Post Mortem.—We found that the ligaments had been torn away from their insertion into the humerus, a thin layer of osseous tissue being attached to the ligaments at the seat of rupture.

II.—Ovariotomy in a Troublesome Mare.

Subject.—A chestnut coloured Iceland pony, aged.

History.—Lately the pony became extremely vicious, biting and kicking at any person who approached her in the stable. She was so bad that she could not be worked.

Treatment.—Performed ovariotomy. There was somewhat more difficulty than usual in performing the operation owing to the narrowness of the vagina affording little room for the manipulation of instruments therein. The operation had the desired result, the mare becoming perfectly quiet within a month afterwards.

III.—Ovariotomy of a Mare showing Pain at Œstral Period.

Subject.—An aged bay polo pony.

History.—At each period of œstrum, the mare evinced symptoms of colicy pains, which passed off after the cessation of œstrum. She was also more or less peevish at this time.

Treatment.—Performed ovariotomy, which had the effect of curing the pains, whilst the peevishness continued, which, however, was not sufficient to prevent the animal being used.

IV.—Fistula in a Horse's Jaw.

Subject.—A five-years old bay horse of the trooper type.

History.—One year ago, when the mare was taken in from grass, a running sore was noticed on the under aspect of the near side of the

lower jaw, which refused to heal on being antiseptically treated, and afterwards blistered.

Symptoms.—When the mare was brought to me, a festulous orifice was found on the lower edge of the left horizontal ramus of the inferior maxilla, about opposite the level of the third lower molar. The bone was enlarged in the region of the fistula for a width of about three inches, from the inferior extremity of the maxilla to the alveolar border, the enlargement appearing on the inner and outer aspect of the ramus. The swelling was painful on pressure. On examination of the mouth, nothing abnormal could be seen or felt. The mare fed well, but slowly.

Treatment.—Cast and anæsthetised the mare. On inserting a probe into the fistula, it passed readily into the mouth at the outer aspect of the space between the second and third lower molars, whose fangs could be recognised by the probe striking against them. There was a cavity in the base having a capacity about equal to that of a duck's egg. On rotating the probe in the cavity a thick, yellow, creamy, almost solid pus oozed out of the orifice, about sufficient to fill a medium-sized teacup being discharged. I then flushed it out forcibly with plain water, swabbed it with tincture of iodine, and dusted it with pure powdered iodoform, plugged it with gauze squeezed out of tincture of iodine. Dressing was renewed daily for a week, the plug being left out after the third day. There was practically no discharge from the cavity after the operation. The swelling gradually subsided, the pain disappeared, and the animal was discharged cured four weeks afterwards, although the cavity in the bone was not yet completely filled up. The mare fed more readily after the treatment.

V.—Anal or Caudal Fistula in a Mare.

Subject.—A ten years old bay harness mare.

History.—The owner bought the mare six weeks ago, knowing that she had a weeping orifice at the left side of the root of the tail.

Symptoms.—The mare appeared to be lame on the off hind limb, as she sunk on the near one during progression. On the left side of the root of the tail in the fold of skins, between the tail and perineum, there was an orifice whose diameter was equal to that of a lead pencil, from which yellow pus exuded. An ordinary probe passed into the opening failed to reach the extremity of the fistula, and on inserting instead, a narrow gum elastic catheter, the passage was found to extend forwards for a distance of ten inches between the rectum and the sacrum.

Treatment.—Cast and anæsthetised. Incised the upper wall of the fistula for a distance of about six inches, until the finger could

reach the blind extremity of the sinus, where granular inspissated pus was found confined in a depression below the level of the external opening. The black epith had grown into the floor of the fistula for a distance of about two and a half inches. I pared away the lining with the knife. Completely evacuated the sinus of the pus by forcible irrigation with a large syringe. Injected tincture of iodine, insufflated powdered iodoform through a piece of hose-piping, plugged the cavity with gauze saturated with tincture of iodine, six yards being required to fill it. Dressed the lesion daily for a while with tincture of iodine, iodoform, and plug of iodinised gauzes. When it appeared covered with healthy granulations the dressing was discontinued, and the cavity was gradually filling in without any discharge when the mare was sent home, complete cure being only a question of time.

VI.—Digital Ligation for Sub-Acute Laminitis.—Case I.

Subject.—An aged American pacer, said to have been very fast. In good condition and apparently quite sound, except for great lameness in front.

History.—The horse had been lame for several months, and could not be got to go sound. He was the property of a carman who kept fast horses.

Symptoms.—The horse was very lame in both fore limbs, being reluctant to move, and when forced to do so, he went on his heels in front, and brought the hind legs well under the body. When at rest, he stood with the fore limbs propped out in front. There was no fever, and the animal fed well. The soles were flat.

Treatment.—A hypodermic injection of adrenalin was tried over each digital artery on two occasions without effect. I then performed digital ligation in the standing position after injecting cocaine over the plantar nerves. There was very marked improvement within a week after the operation, and the improvement continued, the animal being discharged in a fortnight almost perfectly sound, trotting at a fast pace, with great freedom, which delighted the owner.

Case II.

Subject.—An old grey cob, with clean limbs, which had done great service for the owner, a carman.

History.—The cob had been going lame on and off for months, and was now constantly lame.

Symptoms.—Decidedly lame in front, the animal going with a pattering gait on his heels. The soles of the fore feet were flat.

Treatment.—Performed digital ligation, which had a very good effect, enabling the animal to return to work.

VII.—Inguinal Hernia in a Bitch.

Subject.—A brindled Great Dane bitch about seven years old.

History.—A large swelling formed between the hind legs about a year ago, which occasionally caused the animal to suffer pain.

Symptoms.—The bitch was in good health, but not in the best condition. There was a swelling almost as large as a man's head in the inguino-perineal region, hanging down as far as the hocks. On placing the animal in the dorsal position, and manipulating the armour, it was found to take origin in the left inguinal region. Its consistence was semi-solid, and it was corrugated to the feel in its depth. It could not be reduced.

Diagnosis.—Inguinal hernia.

Treatment.—Anæsthetised the bitch in the dorsal position. Incised the skin antero-posteriorly at its centre for a distance of about three and a half inches; incised the peritoneum to a similar extent, and found the uterus inside it with a large quantity of fat in its broad ligaments, which gave to the tumour its corrugated feel. Ligatured the body of the uterus and the two horns behind the ovaries, as they could not be reached through the inguinal opening, and removed the entire organ.

Ligatured the peritoreal sac ; did not suture the hernial ring, which was comparatively small ; sutured the skin with a small plug of gauze beneath it. Removed the gauze plug the next day, dressed with tincture of iodine. Renewed the tincture of iodine for a few days, and then discontinued the dressing. The wound filled in gradually and was completely healed in a fortnight, when the animal was discharged completely cured.

PREVENTION OF CAPPED ELBOW.

By Capt. J. R. HODGKINS, D.S.O., F.R.C.V.S., R.A.V.C.,
Secunderabad, India.

Many, perhaps the majority of, capped elbows are caused by contact with the ground of the affected part.

Recognising this fact, Mr. Conrad, T.E., writing in *L'Echo Vétérinaire,* June, 1919, describes what he terms " Un coussin sous sternal."

The pad is made by wrapping several layers of sacking round a surcingle (Bibliographical Notes—Surgery—Veterinary Review, Vol. iii, No. 4, Nov. 19).

In imitation of this the present writer had a pad made, of which the following is a description :—It consists of stout basil stuffed with coir and ventilated by means of eyelet holes. It is supported by

webbing over an ordinary surcingle pad. The interior edge of the pad is recessed to admit the elbows when the animal is standing.

In order to keep the sternal pad in the required forward position, it is also fitted with a webbing passing across the breast.

Of several devices, one (which the writer considers will not be wrongly attributed to Mr. J. MacQueen) consists of an extension, with numnah, of the rug 18 ins. deep and 2 feet long.

This is excellent, but obviously unfitted for a part of the world where rugs are never worn.

HABRONEMIASIS.

CAPT. J. R. HODGKINS, D.S.O., F.R.C.V.S., R.A.V.C.,
Secunderabad, India.

IN the June number (1920) of this Journal were published some results of post-mortem examinations on horses which were found suffering from *Habronemiasis*.

The patient, an Australian gelding trooper, ten years old, on post-mortem was found to be infested with *H. microstoma*.

The horse salivated constantly at feeding time and frequently in the intervals.

He was thrown on three occasions, his teeth carefully regulated, and every visible part of the mouth and pharynx examined for a clue as to the cause of the ptyalism.

A vermifuge test was carried out after a 36-hour preparation by fasting.

He received	℞.	Thymol	℥iss.
		Chloroform	℥iii.
		Ol. Tereb.	℥ii.
		Ol. lini.	oii.

The result of this was positive and efficacious for certain round worms, for a careful search revealed none at post-mortem examination.

It had no effect on *Habronemæ*, which were alive and well in the stomach.

It was disappointing to find nothing to account for the constant slobbering. It is not a symptom of *Habronemiasis*, for it was not present in any of the cases previously recorded by the writer. There were no positive symptoms of this stomach disease.

But if the vermifuge test is carefully carried out with either the prescription given or with oil of chenopodium, it will be found that if the debility is due to strongyles or oxyures, the horse will rapidly pick up and put on flesh at the rate of 10-20 or even more pounds per week. The horse illustrated, if furnished, should weigh over 900 lbs.

In a case now under treatment which is suspected of being a case of *Habronemiasis*, a trial is being made of carbon bisulphide, followed by weekly injections of atoxyl. The debility card attached gives information as to feeding, weights, etc.

DEBILITY CARD.

Unit.	No.	Date of Admission	Probable Cause.
	A 82	1-8-20	Parasitism Intestinal.

Examination ...		Result.
	Mallein Test ...	Negative.
	Blood Examination	Negative.
	Vermifuge Test ...	Positive. Oxyures Cyclostomes.
	Dental Examination	Enamel Points. Wolf's Teeth.

Weight ...		Cwts.	lbs.	Gain.	Loss.	
	Admission ...		770	...	...	
	1st Week ...	...	...	...	...	
	2nd ,, ...	...	760	...	10	Total
	3rd ,, ...	...	750	...	10	Absolute
	4th ,, ...	...	772	22	...	Loss =
	5th ,, ...	...	768	...	4	20 lbs.
	6th ,, ...	...	750	...	18	
	Total ...	...	...	22	42	

Rations ...					Lbs. per Day.	
	Barley ...	...	...	...	2	
	Gram ...	...	...	...	2	
	Koolthi ...	...	...	...	...	
	Oats ...	...	...	...	6	Five
	Linseed ...	...	...	...	...	Feeds
	Bran ...	...	...	...	2	per
	Dry Grass ...	...	...	...	15	Day.
	Chaff ...	...	...	...	5	
	Lucerne ...	...	...	...	5	
	Guinea Grass	...	...	...	5	

Result and Remarks. No improvement.
The animal had been in Hospital three times previously for ptyalism.
Not likely to be of further use in the Service; destroyed.

LENGTHY INVAGINATION OF THE SMALL BOWEL IN A COW.

By HUGH BEGG, F.R.C.V.S.,
County and District Veterinary Inspector for Lanarkshire.

SOME time ago, through the courtesy of a veterinary friend who acts as visiting Inspector of Meat at the abattoir of a Burgh in this

County, and with whose consent the case is recorded, I had the privilege of examining what can be described as an unique case of invagination of the small bowel, the telescoped unit being fully four feet in length.

The subject was an aged white and brown Ayrshire cow in good killing condition.

History.—She had been bought by a dealer in fat stock at an Auction Mart, and was brought to another Mart for re-sale. She refused food, and is said to have been ill at ease when housed at the second Mart and so was not put up for sale. The owner, thinking she might recover soon, did not seek professional advice, but finding that she was likely to die after seven days, he had her conveyed to the local abattoir with the object of salving what he could of her value. It was asserted that the cow never exhibited any very marked signs of pain, the chief symptoms being slight tympany, an absence of fæces, dullness of countenance, and stolidity in deportment.

Appearance of the invagination.—There was considerable evidence of local peritonitis with an abundance of fibrinous exudate covering the affected part which was of a dirty variegated dark-red colour. The anterior portion of the bowel had invaginated itself into the posterior, forming a triple cylinder of bowel fully four feet long.

Attempts to undo the invagination failed owing to the strength of the adhesions. When handled, the part felt like a well-filled sausage, excepting that it did not pit on pressure. When cut across at the posterior extremity, the surfaces showed the triple layers very distinctly, though they were thickened and firmly adherent owing to the tenacious intervening exudate. Bisected near the middle of the invagination, the layers had a less discrete appearance owing to advancing necrosis, which rendered the cut surface more homogeneous or concrete, but of a dirty reddish-purple colour. The post-mortem revealed no other lesion, and the carcase was condemned.

The cause of the invagination can only be guessed at, there being an absence of earlier history, but the vicissitudes of the marketing of animals often embrace causes that are considered potent to produce intussusception of bowel, *e.g.*, the liberal giving of proteid food of whatever kind that is at hand to an animal that is hungry after a period of fasting, violent exercise and over-exertion followed by thirst and the drinking of large quantities of cold water, any of which is liable to set up irritation, spasm and catarrh of the bowels and diarrhœa.

THE LATE MR. W. C. HAZELTON, M.R.C.V.S.

THE LATE Mr. W. C. HAZELTON, M.R.C.V.S.

A MAN of exceptionally fine physique and apparently in the best of health, it came as a shock to his relatives and friends to hear that Mr. Hazelton had died suddenly; and by his death the county of Buckingham lost a loyal gentleman and a good practitioner, Popular with all classes, a good sportsman and follower to hounds, and an excellent veterinary surgeon with all classes of stock, William Hazelton had made for himself a very large *clientèle;* and, what is more, he enjoyed the confidence of his neighbouring practitioners, who frequently relied upon him for consultation. Known to be "straight," he always "played the game," and the extent of his practice was a tribute to his skill. Although not taking any active part in the politics of the profession, he was a keen observer and well up-to-date in everything pertaining to progress; whilst in local affairs his name did honour to the profession. A graduate of the New Veterinary College, Edinburgh, he completed a very creditable student career by winning the second place in the Fitzwygram Competition. For many years he held a commission as Veterinary Officer in the Yeomanry, and during the past war he rendered valuable service in the purchase of remounts. His loss in the district will be keenly felt, and his name, as a practitioner, will long be revered as that of one whose advice was given with mature judgment, and, once given, was invariably followed without quibble, even though it meant the condemnation of a valuable animal. The profession can ill afford to lose such men, and to his family and personal friends his loss is irreparable.

Reviews.

A BRIEF REVIEW OF THE REPORT OF THE CHIEF VETERINARY SURGEON AND THE VETERINARY BACTERIOLOGIST OF SOUTHERN RHODESIA FOR THE YEAR 1919.

THIS is an extremely interesting report, and describes much useful work, mostly performed under trying conditions. African Coast Fever continues to be the most troublesome infectious disease of the territory. In dealing with the question of the distribution of the staff some significant remarks are made. "A heavy mortality, whilst suspicious, is by no means an indication of the existence of an infective disease. Serious losses occur frequently from poverty and other causes. . ."

Of the total mortality amongst cattle in this country, the writer estimates that not more than 6 per cent. is due to scheduled infective diseases, including quarter-evil.

"The solution of Coast Fever and various other difficulties rests largely with the stock owners and not on laws and regulations."

1920 8 fresh outbreaks, 798 head mortality.
1919 5 " 374 "

Dipping has proved very effective in dealing with infected areas, and as a means of preventing infection on areas where it has been practised for a number of years. Dressing of ears and tails is considered unnecessary in the case of animals which have previously been regularly dipped. The disease appears capable of repression; animals recover from a slight attack, and later succumb from a virulent attack when the rains wash off the arsenic from the skin, and the dips become reduced in strength by reason of the rains.

"The possibility of a suppressed form of African Coast Fever as the result of short-interval dipping is a matter of practical importance, and deserving of the closest investigation in the laboratory and in the field." During the year 229 dipping tanks were constructed, bringing the total up to 1,583, but many more are required.

Quarter Evil.—Three distinctive facts have been observed. (1) The disease appeared more contageous than sporadic at the beginning of the outbreak. (2) Mature, and even old, animals succumbed in a small percentage of cases. This was generally only on the first visitation to a herd. (3) Animals died all the year round.

"Germ-free" preparations were largely used for inoculating purposes. These were first tested on sheep, and one of these proprietary "filtrates" failed to protect; a second test showed it was more successful in larger doses than recommended by the manufacturers. Another proprietary "germ-free" material proved more successful. It was impossible to experiment with cattle, and results from sheep may not apply to cattle.

Anaplasnious and Piroplasnious in cattle were more prevalent than in the previous year. The increase in the prevalence and mortality is accounted for as in the last report, viz.: (1) Increased tick activity, the result of ineffectual dipping. (2) The relatively greater susceptibility of pure-bred and grade stock, and an exultation of the virulence, particularly of gall sickness, by passage through them. Virus vaccine was used for animals reared on tick-free farms.

Rhodesian-bred, pure bred or grade animals were sent into inoculation camps from dipped areas.

25 were inoculated; 16 gave redwater reaction; 24 gave anaplasnious reaction.

Contagious Abortion has been found to be wide-spread throughout the territory. In most cases the specific nature was not suspected by European or native owners. "There is one instance of a native regarding it as dangerous, because his method of dealing with aborters was to sell them to the first buyer that came along." (We have observed similar instances amongst more civilised races.)

Dipping was found useful as a protective measure. Devitalised vaccine prepared at the Veterinary Laboratory was used in conjunction with the usual methods.

Useful results appear to have been obtained. It is not claimed to eradicate or prevent the spread of disease by these means, but anything that will produce an early return to normal catering is considered useful.

Tuberculosis.—The only case recorded was an aged Sussex bull, originally imported from England. At the Johannesburg municipal abattoirs eight cases were detected on "post-mortem" inspection of Rhodesian slaughter cattle.

Horse Sickness.—Perhaps the most interesting reading of the whole report, at any rate to horse owners in South Africa, is of the work on this disease by the Bacteriologist. The following tables are reproduced from his report in October giving the results of the inoculation of police horses by his method from August, 1912—July, 1919.

SUMMARY OF POLICE HORSES INOCULATED AND RESULTS.

Season.	Number treated.	Died under treatment.	Number of inoculated horses exposed.	Died on exposure.	Died from other causes.	Sold.
1915	6	1	5	...	...	...
1915-1916	32	2	35	...	...	...
1916-1917	115	17	133	8	6	3
1917-1918	29	6	139	7	3	...
1918-1919	38	7	160	4	1	...
	220	33 =15%	472	19 =4%	10	3

SHOWING NUMBER OF SEASONS SURVIVED BY INOCULATED HORSES.

Date inoculated.	Number inoculated.	Died under inoculation.	Leaving.	Seasons survived. 4.	3.	2.	1.
Prior to 1915	6	1	5	4	4	4	5
1915-1916	32	2	30	25	25	27	30
1916-1917	115	17	98	...	77	77	86
1917-1918	29	6	23	...	...	21	21
1918-1919	38	7	31	...	...	...	31

29 horses out of 35 exposed have survived 4 seasons.
106 ,, 133 ,, 3 ,,
129 ,, 156 ,, 2 ,,
173 ,, 187 ,, 1 season.

Note.—These figures include deaths and reductions from causes other than horse-sickness.

He modestly states: "It is true that the results of the application of the virus-vaccine method have been fairly satisfactory, but the many problems associated with the cause, transmission and cure of the disease still remain to be solved."

He also reiterates a sentence from this report ending with the following significant remark: "I should prefer in future to devote

my energies to purely experimental work rather than to the application of an imperfect method of inoculation." Two interesting diseases of cattle, which space prevents us from more than mentioning, are myiasis, "screw worm disease," and "sweating sickness."

The former is caused by the larvæ of certain flies burrowing through the skin and into the tissues underneath.

The latter, in addition to profuse sweating, shows symptoms of high fever, congestion of mucous membranes, mucoid discharges from the eyes, nostrils and external orifices, and a soapy saliva from the mouth.

The report of the Bacteriologist, as usual, concludes with a plea for more convenience for research work. J. M. A.

Correspondence.

SALARIES OF THE INDIAN CIVIL VETERINARY DEPARTMENT.

To the Editor of THE VETERINARY JOURNAL.

SIR,—I have read with interest the article entitled "The Indian Civil Veterinary Department: a Retrospect and a Warning," by "Anglo-Indian," which appeared in THE VETERINARY JOURNAL of November, 1920, and I feel that I should like to add the following remarks, because I know the good work wfiich has been done by the C.V.D. in Madras since its conception in that Presidency. It is a department with which I think I may be allowed to claim that I was very closely connected, and, although I retired early in 1915, I get frequent news of the excellent work that is being carried on.

I always felt we could never hope for real success unless we had an efficient European staff to navigate the work; but alas, all that was given was a superintendent in charge of the Madras Veterinary College and a travelling superintendent for the entire Madras Presidency. Even with this, most useful work was done, and I feel sure the names of Colonel Gunn, Major Holmes and Messrs. Achison and Ware will always be remembered by all lovers of horses and cattle owners in the Presidency.

It would be no exaggeration to say that no period of India's connection with Great Britain witnessed such far-reaching changes, both material and intellectual, as those which have occurred during the last quarter of a century. In these the C.V.D. has directly played a great part, and its little handful of willing though poorly paid workers has done wonders among the millions of people who are the owners of many millions of animals.

I believe it was the intention of Government to make India produce its own veterinary practitioners, and possibly that day may come, but not just yet. For the present we must look to the Mother Country for our superior staff, and the only way to get good men is to make it worth their while to go out to India. The whole question rests on salary, and to secure good men they must be paid enough to tempt them to go to India, where the general price level shows a steady increase. The rise was, I remember, specially high in 1905, and in

1910-1912 it was higher still. This rise affected officials with fixed salaries to such an extent that the Home Government ordered a Commission to go to India, with the result that the pay and pensions in the uncovenanted services were increased. It is claimed by Europeans in India to this day that it is the general price-level which has contributed to still render service in India less attractive.

I do not think the Commission referred to did much to make the Civil Veterinary Department more popular, and I feel sure that it will be cheaper in the long run to pay better for the services of skilled men, whose parents have had to pay out a good bit before their sons could get the enviable letters M.R.C.V.S. affixed to their names. —Yours truly.

C. V. DALRYMPLE HAY,
Acting Deputy Commissioner (Retd).

c.o. National Provincial Bank of England,
Piccadilly, W.1.
November 13, 1920.

To the Editor of THE VETERINARY JOURNAL.

DEAR SIR,—" Anglo-Indian's " letter in THE VETERINARY JOURNAL presents, in my opinion, the case of the I.C.V.D. clearly and concisely. It shows once again how a department—essential to the prosperity and progress of our Indian Empire and for long refused fair treatment by Government—is forced to take combined action in order to obtain suitable conditions of service.

Though such action has been taken in the past by other departments of the public service with successful results, Britain's loss of prestige is not inconsiderable in a country like India. It is always harmful to the public service when discontent is rife in a department and Government is forced eventually to concede better conditions.—Sincerely yours.

C. STRACHEY,
Colonel.

27, Cadogan Gardens, S.W.
November 7, 1920.

VETERINARY PROPAGANDA.

To the Editor of THE VETERINARY JOURNAL.

It is encouraging to think that the veterinary profession is beginning to see the necessity of educating the general public in the work carried out by its members. There is a general idea, not only among the uneducated, but the educated classes, that the work of a veterinary surgeon is restricted to curative treatment.

It is only a few years back that doctors were similarly recognised, and that the student of hygiene and a bacteriologist belonged to another profession.

The progress in the study of veterinary science, within recent years, is only appreciated by a small minority of the general public,

principally due to the fact that they have never been informed or have had opportunities of gaining information.

As a professional body, are we justified in breaking the precept of hiding one's light under a bushel?

To give an example. If there had been more publicity in veterinary research, would not the general public have realised the dangers of introducing rabies into this country, taking for granted that although there are a few individuals whose idiosyncrasy is to break all laws and regulations, yet the majority of people do so through ignorance of the consequences.

It is up to us as a profession to try and interest the public in veterinary science, particularly relating to prevention of diseases.

Even during the war difficulties arose in this particular subject from want of knowledge.

A new army was formed, a great number of soldiers had no idea of the management of animals; a veterinary officer was considered the technical adviser on animal disease, principally after disease had occurred, or to control an outbreak of diseases of a contagious nature; but it didn't dawn on all that economics, hygienic and general stable management of horses also came under the duties of the veterinary officer, otherwise the appointment of horse advisers, filled by laymen, would have never been created.

Periodically, in the *Times*, there is an article written "By Our Medical Correspondent," which deals with disease, prevention and control of disease, new medical discoveries, which undoubtedly keep the general public interested in medicine, which in turn is good propaganda work.

There is no doubt, if we want the support of the general public, we must interest them in the research work of veterinary science, and there is no greater opportunity than now, and a great deal can be done by a selected publicity committee furnishing articles to the daily papers under the heading of "Our Veterinary Correspondent."—Yours faithfully,

H. S. MOSLEY,
Lt.-Col., R.A.V.C.

NOTICES.

All communications should be addressed to 8, Henrietta Street, Covent Garden, London, W.C.2. Telephone: Gerrard 4646. Telegrams: "Bailliert Rand, London."

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